British Columbia's

# Environmental Assessment Office



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ENVIRONMENTAL ASSESSMENT OFFICE

ANNUAL REPORT 1999-2000

# Message From The Minister

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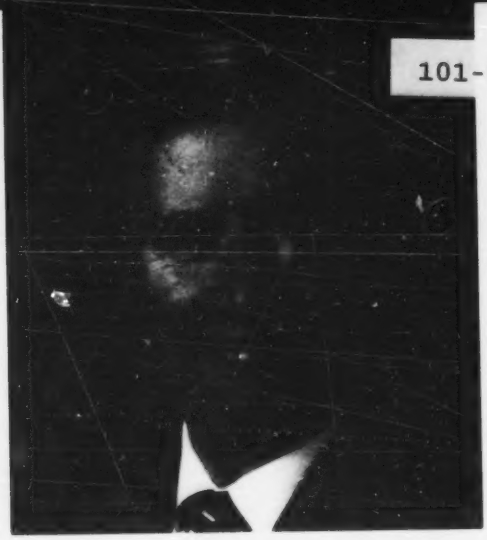


The Environmental Assessment Office plays a significant role in the Province of British Columbia by undertaking comprehensive reviews of major development proposals that balance economy, environment and social well-being.

A key feature of the environmental assessment process is the participation by the public and First Nations. The open process includes numerous opportunities for commenting on proposals and all project information is easily accessible.

As minister responsible for environmental assessment, I am confident this annual report demonstrates that the legislation and review processes are working well.

British Columbians have a quality of life that is second to none. The Environmental Assessment process helps maintain that quality of life by supporting economic development that is truly sustainable.

Honourable Ian Waddell
Minister of Environment, Lands and Parks

Value-added forest industries, such as those that utilize wood chips, are reviewed if they meet or exceed a threshold size.

# Letters

Letter from the Minister to Lieutenant Governor

December 2000

His Honour the Honourable Garde B. Gardom
Lieutenant-Governor of British Columbia

May It Please Your Honour:

I respectfully submit the annual report for the Environmental Assessment Office for the period from April 1, 1999 to March 31, 2000.

Honourable Ian Waddell
Minister of Environment, Lands and Parks

Letter from Deputy Minister

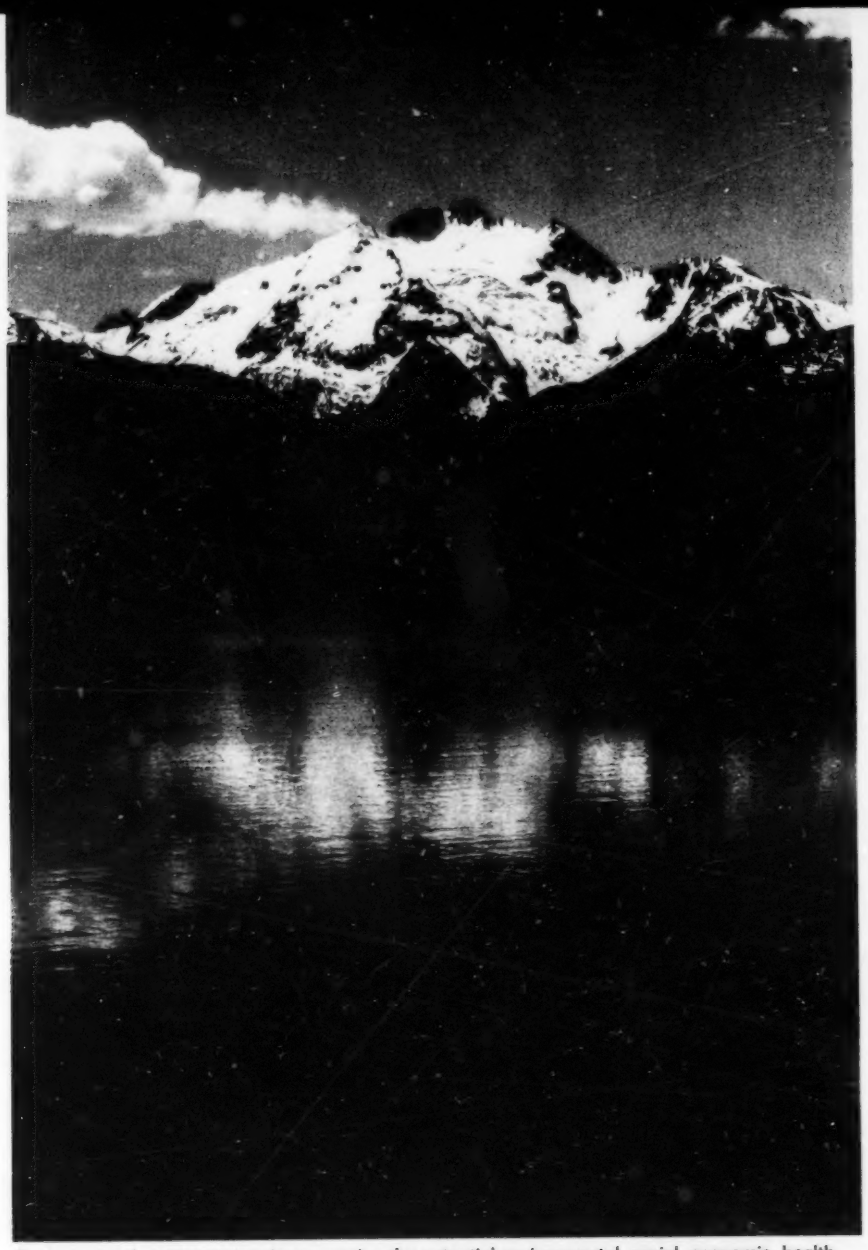
December 2000

The Honourable Ian Waddell
Minister of Environment, Lands and Parks
Province of British Columbia

Minister:

It is my honour to submit the annual report for the Environmental Assessment Office. This report details the office's activities for the period from April 1, 1999 to March 31, 2000.

Sheila Wynn
Deputy Minister & Executive Director



Environmental assessment reviews examine the potential environmental, social, economic, health, cultural and heritage impacts of proposed major developments.

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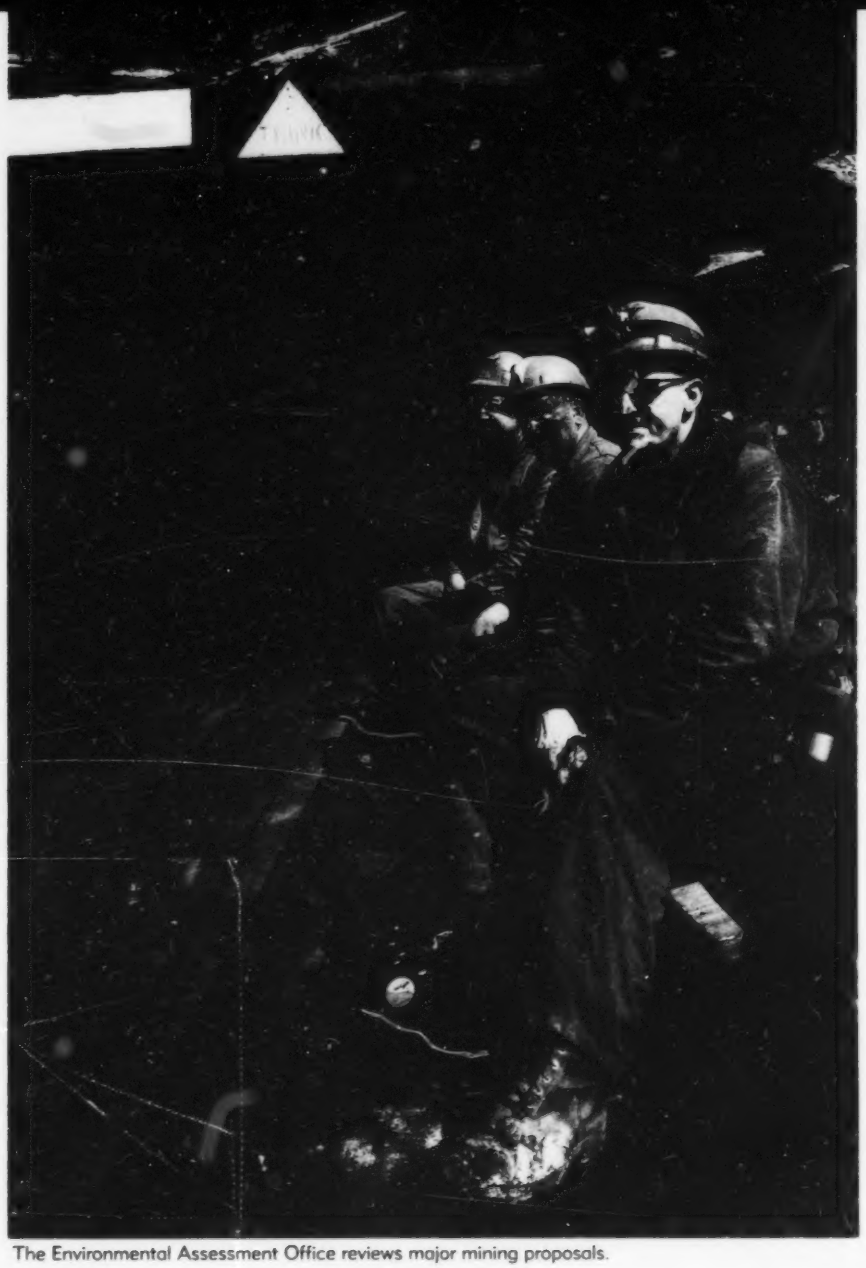


The Environmental Assessment Office reviews major mining proposals.

# Introduction

This is the fourth annual report of the Environmental Assessment Office (EAO). It presents an overview of the assessment process, a summary of projects under review, information on certified projects, and a discussion of other issues that fell under the jurisdiction of the office.

The *Environmental Assessment Act* became law on June 30, 1995. It created a legislated, single, consistent review mechanism for assessing major projects throughout the province in the following sectors: mining, tourism and recreation, energy, transportation, industrial, waste disposal, food processing, and water management.

The Act also established the EAO, a neutral provincial agency that administers the environmental assessment process.

This annual report covers the activities of the EAO from April 1, 1999 to March 31, 2000.

## Project Registry

One of the key features of the *Environmental Assessment Act* is the legislated requirement for public participation in the review of proposed projects. Public participation includes notification and information about the project.

The EAO establishes and maintains the Project Registry for the purpose of facilitating public access to project documentation. It lists all projects under review and provides the status of each review.

The registry contains an index of records available for each project and all records or parts of records that have been made available to the public. All project documents, as specified by the Act, are included: public notifications of reviews, project applications, review comments, proponent responses, project specifications, project reports, and project committee minutes, recommendations and decisions. Non-legislated material, such as news releases, meeting minutes and technical reports, is also included.

Registry material is available for viewing at the EAO in Victoria, and on the Website at www.eao.gov.bc.ca. In addition, registry material is available in local communities near the site of proposed projects, in government agent, municipal or band offices, or in libraries.

Minimizing the impact of development on wildlife habitat is an important part of the environmental assessment process.

# Improving the Process

## Responding to EA Evaluation

The EAO has responded to recommendations made by Barry Sadler in his 1997 independent evaluation of B.C.'s EA process. To improve implementation of the EA process, the EAO produced a new project committee operations manual and a detailed guide for proponents, First Nations and the public. Since 1997, improvements to the EA process include:

- amendments to the thresholds for triggering an environmental assessment review of proposed projects;
- increased efforts by the EAO to work with proponents and agencies at the pre-application stage and during a project review;
- improved guidance on project committee operations and member accountability;
- clarification of proponent information requirements and agency standards;
- improved public consultation guidance; and
- enhanced First Nations' participation.

Initiatives undertaken to improve the EA process have already resulted in improvements to: client service, process delivery, certainty, leadership during reviews, and review information requirements.

The EAO is currently working on the remaining recommendations, which include:

- development of EA process training;
- continued clarification of agency standards for information requirements;
- increased focus on compliance monitoring; and
- improved guidance for First Nations' participation in the EA process.

## Addressing Business Task Force Issues

In 1999, the EAO undertook two studies in response to issues raised by provincial government's Business Task Force. The task force was concerned about the perceived complexity and length of the EA process and its integration with other permit approvals.

The first study was a comparative analysis of the EA process in selected jurisdictions to determine whether similar EA processes elsewhere are less time consuming or less complicated than in British Columbia. The independent study determined there are no significant operational differences between British Columbia and other jurisdictions. It suggested that the characteristics of an individual project, rather than the EA process itself, determine the complexity of a review.

The second study was an inter-ministry initiative aimed at streamlining the regulatory approval processes and easing the bureaucratic burden on proponents for major projects. The requirement to proceed through both EA and permit approval review processes exposes large-scale projects in B.C. to the risk of duplication, inconsistency and overlap between the two levels of reviews, especially where permit reviews do not proceed concurrently with the EA review.

The inter-ministry study identified opportunities and made recommendations for improving coordination between EA and permit reviews. Implementation of the recommendations has resulted in the following changes to government activities and structures:

- During the EA review - First Nations and public consultations are conducted at the same time or as part of the same process.
- Following EA approval - The EAO accepts responsibility for establishing post-certification co-ordination of EA and permit reviews. This responsibility will extend to ensuring that a "one-window" government contact is designated following project approval.

## PRE-APPLICATION

Although not a formal requirement of the EA process, proponents are encouraged to undertake initial consultations with the EAO before a project concept is fully developed.

Pre-application discussions provide the EAO with an opportunity to:

- discuss review process, legal requirements, format, and content of application; and
- assist in identifying appropriate information sources and contacts in line ministries.

The EAO will convene meetings with key provincial and federal agencies to assist in establishing whether the project is reviewable under the provincial *Environmental Assessment Act* or the Canadian Environmental Assessment Act (CEAA).

Pre-application meetings provide an opportunity for governmental and non-governmental agencies to:

- identify key issues;
- provide project-specific information requirements;
- provide details on the appropriate design and methods for data collection; and
- scan the project's potential effects based on the information gathered.

Prior to a proponent submitting an application for a project certificate, EAO emphasizes pre-application meetings with all stakeholders and First Nations.

The pre-application phase is the time for the proponent to:

- learn about current land use and resource management plans relating to the project;
- learn about and take into account public and First Nations' views at the preliminary project concept stage;
- learn about associated land use statutory permit review processes;
- collect and analyze available data from government and other sources on environmental, economic, social, cultural, heritage and health conditions in the vicinity of the project;
- consult on all the information gathered in order to identify key issues and major data gaps; and
- commence baseline data collection where significant data gaps exist.

Pre-application meetings allow for a more efficient and effective EA review. The EAO recommends that all pre-application discussions with government agencies, First Nations and the public be recorded and the status of relevant data summarized for the application.

# Five-Year Review of CEAA

In 1995, the federal government proclaimed the *Canadian Environmental Assessment Act* (CEAA), which requires federal departments and agencies to conduct environmental assessments of projects that fall under their jurisdiction. The legislation includes a provision for the federal Minister of Environment to conduct a review of the CEAA after five years. The review is being coordinated by the Canadian Environmental Assessment Agency.

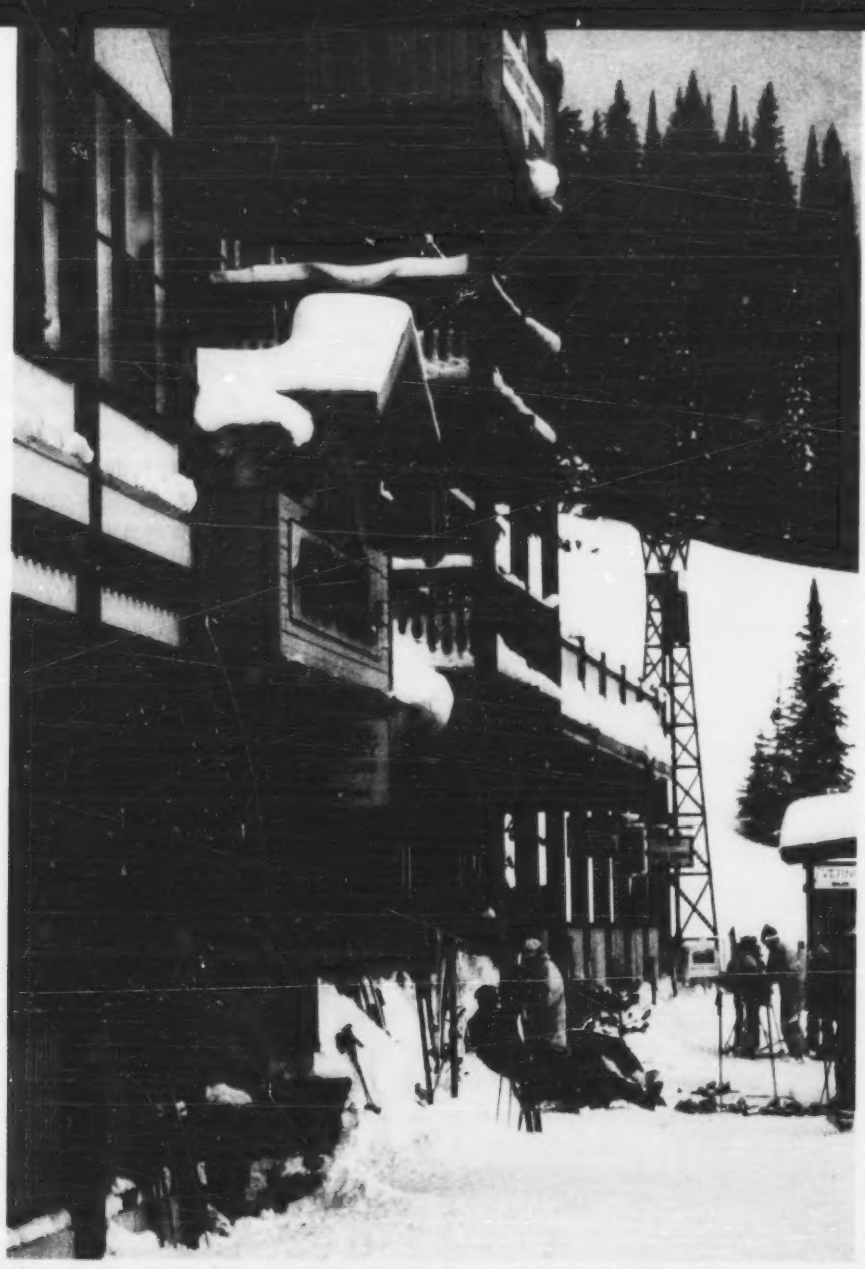
In 1999, the agency prepared a discussion paper, Review of the *Canadian Environmental Assessment Act*: A Discussion Paper for Public Consultation, which served as the basis for Canada-wide discussions between the agency, stakeholders and the public.

The provinces and territories reviewed the paper and noted a need for a more thorough and balanced discussion of provincial roles in environmental assessment. Provinces and territories identified a number of problems with the CEAA including:

- jurisdictional overlap and potential for federal interference in provincial matters;
- unpredictable timelines creating a potential for duplication with other jurisdictions; and
- specific procedures that hinder effective assessment.

To address these concerns, provincial and territorial deputy ministers (except Quebec's) directed their respective environmental assessment staff to create a working group. The deputies of the B.C. Ministry of Environment, Lands and Parks and EAO co-chaired the deputy ministers' committee and British Columbia's EAO coordinated and supported the efforts of the working group. The working group developed many case studies of projects from several jurisdictions including B.C., that were reviewed under CEAA and provincial EA legislation or permitting procedures. The group, relying on a team of consultants, produced several background papers that were used by the ministers to form their conclusions and recommendations to the federal government.

The provincial and territorial ministers of environment will convey their recommendations for changes to the provisions and applications of CEAA before the summer of 2000. The federal minister plans to table a report and possibly a draft bill with changes to CEAA, late in the fall of 2000.



Major developments in the tourism and recreation sector are subject to the Environmental Assessment Act.

# Special Projects

## Burns Bog Ecosystem Review

In June 1999, Delta Fraser Properties Partnership, which owns 2,200 hectares of land within Burns Bog, and the government of British Columbia agreed to undertake an ecosystem review to determine the crucial factors in preserving the bog as a viable ecosystem. Results of the review would inform future land use decisions about the bog.

Burns Bog is a domed peat bog ecosystem covering approximately 3,000 hectares of the Fraser River delta between the south arm of the Fraser River and Boundary Bay. It is globally unique on the basis of its chemistry, form, size, and flora. Specific plant communities in the bog provide habitat for many rare or endangered species, in particular, the Greater Sandhill Crane.

The EAO managed the review. Dr. Richard Hebda, a bog specialist from the Royal British Columbia Museum, was the expert technical advisor and Gregory McDade, Q.C., advisor to the Minister of Environment, Lands and Parks, facilitated public involvement. The public and stakeholders contributed to developing the nature and scope of the studies.

The main conclusion from the review was that 2,450 hectares of Burns Bog are required to preserve its ecological integrity – its distinct processes and life forms. Forty per cent of the original bog area has been lost to development and more than half the remaining bog has been disturbed by human activities, isolating the bog from adjacent natural ecosystems. The conditions for recovery of Burns Bog ecosystems are favourable because there are many patches of bog vegetation in the disturbed area, including some regeneration in the abandoned peat workings of the central bog, and a large natural zone surrounding the disturbed core.

The review also concluded that the bog's ecological viability is directly dependent on sustaining the water mound and the peat that encloses it. Drainage ditches need to be removed or blocked, and the mound must be connected to a broad zone of peat regeneration and bog water. For long-term viability of the bog ecosystem, connection to the Fraser River and other natural areas including upland habitats is required to support biodiversity and provide water to the main part of the bog.

McDade recommended pursuing partnerships with all levels of government and private interests, acquisition of the critical areas, managing the area as an ecological reserve with some public access, and addressing drainage issues. Ongoing monitoring is recommended to ensure regeneration is taking place.

All project materials are available at the EAO Project Registry, libraries (Vancouver, Delta, Delta South, Ladner) and the Burns Bog Conservation Society. The report is available online at the following Web address www.eao.gov.bc.ca/special/burnsbog.htm

## Royal Bay Residential Development

In 1995, Construction Aggregates Ltd. submitted a proposal to the City of Colwood to redevelop the company's open pit mine, known as Producer's Pit, into a new residential community called Royal Bay. The proposed development of the 250-hectare shoreline gravel pit includes 2,800 homes, community facilities, a park and buffer zones. Phase 1 of the project includes 654 homes, a park and an elementary school.

On March 29, 1999, the Minister of Environment, Lands and Parks received an application and petition from concerned citizens, requesting a full environmental assessment under Section 4 of the

*Environmental Assessment Act*. The EAO undertook a reviewable project evaluation in order to determine whether to proceed with a Section 4 review. EAO determined that a full environmental assessment under the Act was not warranted. The provincial Environmental Assessment process is designed to avoid duplicating existing regulatory reviews, and was not intended as an appeal mechanism for local government decisions. However, the EAO was requested to provide an enhanced public consultation process to ensure the public had better access to all the relevant information.

Some of the issues raised by the public included:

- adequacy of environmental studies;
- seismic hazards, slope stability and erosion;
- water supply and sewage treatment;
- increased demand on public services;
- traffic congestion;
- public consultation with neighbouring communities; and
- planning and management of growth consistent with urban containment.

In B.C., local governments have the legal authority to review and approve residential development projects on private land. This is usually conducted in the context of official community plans and regional growth strategies. The local approval process for residential development includes public consultation, a comprehensive review of social, environmental and economic issues, and referrals to federal, provincial and local agencies. Local governments may require developers to undertake environmental studies.

## SkyTrain

In September 1998, the Minister of Environment, Lands and Parks announced that an independent review by a special commissioner, Derek Thompson, would be established to address environmental issues related to the construction and operation of Lower Mainland's new SkyTrain link. The special commission was requested to design and implement a public consultation process.

The EAO provided the special commissioner with technical and administrative support including:

- dedicated staffing resources;
- full cooperation of, and access to information, from all relevant provincial ministries, authorities and agencies; and
- evaluation criteria developed by EAO to ensure an effective, timely and credible review.

The commission issued its final report in May 1999. Issues identified and discussed included those related to station design (including crime and safety), noise and vibration, connectivity and system operations, and biophysical impacts. Public concerns were presented and potential mitigation measures were proposed. The commission developed a proposal for a Community Legacy Program that would complement the SkyTrain Extension project and provide lasting positive benefits for neighbourhoods along the new route.

The commission identified additional work and information needed to meet requirements of the *Canadian Environmental Assessment Act*. In September 1999, the federal EA review concluded that the project will not cause any significant adverse environmental impacts.

The commission recommended that the agency responsible for the SkyTrain, the Rapid Transit Project Office:

- involve local government in the final station design process;
- provide clear, timely and open communication about project details and timing;
- open storefront offices to promote a responsive public process;

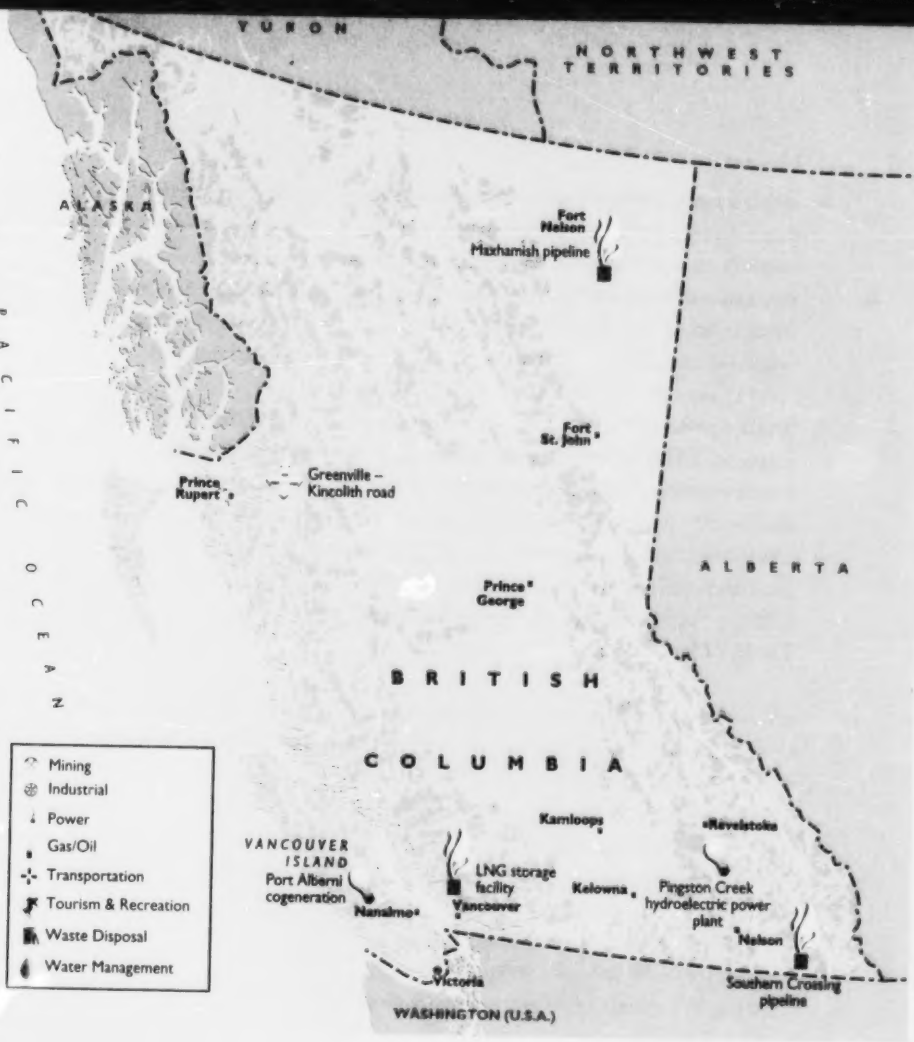
- implement an improved construction and environmental management program and employ an independent, professional environmental monitor to ensure mitigation of biophysical, environment and noise issues during construction;

- finalize mitigation measures for biophysical impacts, noise issues and report all contaminated sites along route alignment; and
- demonstrate well-integrated planning for best connectivity as outlined in the Project Office's Station Design Resource Book and Design Ideas Forums.

The commission recommended government establish a small team of specialists, headed by a senior deputy minister, to implement its recommendations and help solve problems that may arise during the design and construction phase.

With the completion of the special commission's final report, the EAO's involvement with the SkyTrain project was concluded.

## PROJECTS CERTIFIED BETWEEN APRIL 1, 1999 AND MARCH 31, 2000



# Certified Projects

Six projects were certified under the *Environmental Assessment Act* between April 1, 1999 and March 31, 2000. Five projects were in the energy sector and one was in transportation.

## CERTIFIED PROJECTS - ENERGY

### Pingston Creek hydroelectric power plant

**Proponent:** Canadian Hydro Developers Inc.

**Location:** South of Revelstoke

**Date of Application:** February 1998

**Date of Approval:** May 1999

**Value of Investment:** $35 million

**Construction Jobs (person-years):** 127

**Operating Jobs:** 1

The project consists of building and operating a 25 megawatt (MW) hydroelectric power plant on the western shore of Upper Arrow Lake, about 60 kilometres south of Revelstoke. The five main components of the project are the headworks, tunnel, penstock, powerhouse, and transmission line. The headworks consist of an intake, weir and headpond. Water will be diverted from Pingston Creek at peak plant output, and conveyed by a penstock through a tunnel down the mountain to the powerhouse. The powerhouse, with two Pelton turbines and generation and switchgear equipment, is expected to produce 130 gigawatts (GW) annually. A new 13-kilometre transmission line will follow the road access from the powerhouse to Shelter Bay, and an upgraded transmission line will connect Shelter Bay with the BC Hydro Walter Hardman plant, 25 km to the north.

The key issues raised were impacts on fish resources including entrainment of rainbow trout fry at the intake, reduced flow due to diverting water from the creek during the winter months, and blockage of fish migration upstream. The proponent agreed to compensate for entrainment of fry by creating new spawning habitat. The proponent also agreed to increase water releases, and ensure minimum flow levels for October to April. Appropriate mitigation and compensation measures include facility design modifications, operational changes and monitoring programs.

Other concerns included the impact on water quality of Pingston Creek by sediments generated during construction; potential acid rock drainage created during excavation and blasting; and impacts on wildlife and wildlife habitat. The proponent has committed to develop an environmental protection plan that will include a water quality monitoring program and an independent environmental monitoring program.

The Okanagan Nation Alliance, the Spallumcheen Band and the Shuswap Band have overlapping traditional-use concerns in the project area. An aboriginal interest study, coordinated by the Okanagan Nation Alliance, assessed potential project infringement on aboriginal rights and traditional use. The study did not identify any traditional uses specific to the project site.

### Maxhamish pipeline

**Proponent:** Paramount Resources Ltd./Berkley Petroleum Corp.

**Location:** Fort Nelson, northeast of Maxhamish Lake

**Date of Application:** September 1999

**Date of Approval:** December 1999

**Value of Investment:** $40.8

**Construction Jobs (person-years):** 33

**Operating Jobs:** 8

The Maxhamish pipeline project involves construction and operation of a natural gas-gathering pipeline connecting Paramount's proposed sweet-gas-processing facility, 10 kilometres northeast of Lake Maxhamish, to a connection with the Westcoast Energy Inc. pipeline transmission system downstream of its Fort Nelson gas-processing plant.

The 164-kilometres, 323.9-millimetre (12-inch) diameter pipeline will transport sweet-residue natural gas along the right-of-way of a new access road from the Maxhamish plant to Highway Number 77, then follow the highway to Fort Nelson River, where it will join a Westcoast Energy Inc. pipeline right-of-way to Fort Nelson.

Environmental issues include impacts of construcion on wildlife and traditional land use, and impacts of stream crossings on navigability, water quality and fish habitat.

Trenchless techniques and aerial/clear span crossings will be used to cross seven large and intermediate watercourses with high fisheries values. Approved construction methods and necessary mitigation measures will be used at other stream crossings to minimize impact on riparian zones, erosion and sedimentation. The proponent will develop an environmental protection plan, a water quality monitoring program and will provide independent environmental supervision during construction.

The proponent has agreed to encourage the re-establishment of original vegetation where alteration of wildlife habitat occurs along the right-of-way. The width of the corridors will be minimized and treed buffer strips will be retained. The construction schedule (fall/winter) will avoid the reproductive season and the residency season for migratory species. The proponent has agreed to enforce a no hunting/no fishing/no firearm policy for employees and contractors during construction and operation phases.

The project will offer economic opportunities to the community in the form of construction jobs and permanent jobs, as well as taxation revenues over the lifetime of the project. No significant socio-economic issues were identified.

The Fort Nelson and Prophet River First Nations raised concerns over cumulative effects; impacts on fishing, hunting and trapping; compensation for moving traplines and a cabin; employment opportunities; and economic participation. The Fort Nelson First Nation prepared a list of certification conditions that were generally accepted by the proponent.

Only one archaeological site was identified. Impacts to the site have been mitigated by collection of all visible artifacts. However, the proponent will need to apply for a *Heritage Conservation Act* permit before altering the area.

The proponent must complete an emergency response plan prior to start of construction. To protect the environment from effects of malfunctions and accidents, such as leaks of fuel, lubricants and hydraulic fluids, the proponent must regularly inspect and service machinery that will operate in or near the high-water mark.

Although the pipeline will initially transport sweet gas, it will be designed for sour gas service to enhance future flexibility. Before the pipeline can be used for sour gas transport, the proponent must engage in discussion and successful resolution of all safety concerns of the Fort Nelson and Prophet River First Nations.

### Port Alberni cogeneration

**Proponent:** Port Alberni Cogeneration/ joint venture of PanCanadian Petroleum Limited and ATCO Power Canada

**Location:** Port Alberni

**Date of Application:** August 1999

**Date of Approval:** December 1999

**Value of Investment:** $240 million

**Construction Jobs (person-years):** 254

**Operating Jobs:** 23

The project involves construction and operation of a 290-MW natural gas/steam cogeneration plant located at the Pacifica Papers Inc. mill site in Port Alberni. Electricity will be generated by an advanced design, naturalgas-fired, 170-MW combustion-turbine generator. A heat-recovery steam generator and a 120-MW steam turbine generator will use waste heat from this process to generate additional electricity, significantly improving efficiency. Electricity produced at the facility will tie into BC Hydro's existing 138 kilovolt (kV) transmission lines on the mill site. No additional electrical transmission lines will be required offsite.

A number of environmental impacts of the project were identified. These include: air quality, water quality in the Somass River affecting fish habitat, release of steam from the cooling tower causing fog and ice, potential site contamination, and noise from the construction and operation of the facility.

The proponent has agreed to have an ambient nitrogen oxide and ozone monitoring program, submit a greenhouse gas mitigation plan, and use advanced, dry, low-nitrogen-oxide turbine technology. During construction, the proponent will take measures to prevent sediments and contaminants from entering the Somass River and estuary and implement measures to reduce noise. In addition, the proponent will provide an independent environmental monitor.

No significant social or socio-economic issues were identified. The proponent agreed to recruit operational staff from the existing Pacifica Papers mill, which is currently undergoing restructuring. The proponent will hire locally for the construction jobs.

In addition to the environmental concerns mentioned above, the Tseshaht First Nation and the Hupacasath First Nation requested job and economic development opportunities. The proponent will include First Nations in the local hire program, implement a "PowerStarter" program, discuss current hiring opportunities at the Port Alberni mill, and offer two scholarships to First Nations enrolled in power engineering courses.

### LNG storage facility

**Proponent:** Westcoast Gas Services Inc.

**Location:** McNab Creek Valley, Howe Sound

**Date of Application:** October 1997

**Date of Approval:** April 1999

**Value of Investment:** $120 million

**Construction Jobs (person-years):** 125

**Operating Jobs:** 12

The liquid natural gas (LNG) storage facility project consists of building and operating an 85-million-cubic-metre, liquid nitrogen gas storage facility adjacent to the Centra Gas Vancouver Island Pipeline in McNab Creek valley, about 7.5 kilometres from the shore of Howe Sound. The facility will be capable of liquefying 450,000 cubic metres of natural gas per day, and storing a total volume of liquid nitrogen gas equivalent to 85 million cubic metres of natural gas during the summer months. During about 10 days of peak natural gas demand in the winter, the facility would revapourize up to 8.5-million cubic metres of natural gas per day for delivery to Vancouver Island or the Lower Mainland.

Onsite facilities would include:

- treatment and refrigeration system;
- double-walled, liquid nitrogen gas storage tank;
- containment dike;
- vapourizer and send-out facilities to regasify the liquid nitrogen gas and deliver it to the Vancouver Island Pipeline;
- process building;
- utility plant; and
- control room and staff residence.

Offsite facilities include:

- 138-kV powerline from the existing powerline near the Canfor log sort to the plant site and associated substation;
- barge-docking facility and access road; and
- measurement and regulator station at Eagle Mountain.

The public raised numerous concerns during the review including: the need for a master plan for resource development in Howe Sound before further industrialization; possible loss of tourism revenue due to visual impacts of the storage tank; and possible release of liquid nitrogen gas by accidental failure of components, earthquake or leaks, causing explosion.

The Squamish Nation, which claims aboriginal right and title to the land where the project will be located, was concerned about future land use. Since the operation of an LNG facility requires an exclusion zone, future use of the land by the Squamish Nation would be restricted. The Squamish Nation and the proponent must conclude an agreement on respective interests in land and economic benefits to the Squamish Nation before the issuance of any land tenure.

The project's storage tank will be visible to some residents and users of Howe Sound and night-time illumination of the tank will create a glow above the facility. The proponent will minimize these impacts by painting the tank to blend in and by directing lights downwards.

Public safety was addressed by the proponent. The LNG facility will be located in an exclusion zone, calculated for an onsite fire and travel of flammable vapour. The LNG storage tank will be situated in a diked area, equipped with a sump, to deal with any major leaks. At least two employees trained in spill and hazardous materials management will be located at the facility.

The Squamish Nation and the Ministry of Environment, Lands and Parks raised concerns about potential effects on fish and fish habitat from sedimentation, contamination and decrease in water flow in McNab Creek during hydrostatic testing of the storage tank. The proponent developed a site-specific drainage and erosion plan outlining specific mitigation measures. To ensure stream habitat protection along the powerline right-of-way, the proponent will use riparian reforestation and bank stabilization techniques and proper erosion control measures at stream crossings. In the log sort area, gravel berms, fences, boulders and other barriers will be used to control run-off and erosion.

Mitigation measures to control damage to fish habitat from blasting, fuel spills, and hydrostatic testing have been incorporated into the erosion control plan and the water quality monitoring program.

The proponent has agreed to noise restrictions and monitoring, scheduled land clearing to avoid breeding season of migratory birds, a buffer zone between helicopter flight paths and occupied mountain goat habitat, and special training and precautions to protect bears.

Another environmental issue was air quality. The main emissions would be nitrogen oxides, particulate matter, sulphur dioxide and carbon monoxide. The facility is designed (low nitrogen-oxide burners, stack heights, and site layout) to ensure emissions are within the desirable level for worst-case conditions. Emissions associated with a natural gas-fired

turbine for the main process compressor were eliminated by the change to an electric drive.

The project will create job opportunities for the local community during the construction phase, as well as 12 permanent operating jobs. In addition, the district will benefit from tax revenues.

### Southern Crossing pipeline

**Proponent:** BC Gas Utility Ltd.

**Location:** southern B.C. between Yahk and Oliver

**Date of Application:** January 1998

**Date of Approval:** May 1999

**Value of Investment:** $344.6 million

**Construction Jobs (person-years):** 900

**Operating Jobs:** No additional jobs

The Southern Crossing pipeline project involves:

- building and operating a 312-kilometre, 24-inch- (61-centimetre-) diameter, natural gas pipeline, connecting the BC Gas system to the Alberta natural gas transmission system at Yahk in the east and to the Interior Transmission System at Oliver in the west;
- installing two additional compressor units at the existing BC Gas compressor station at Kitchener;
- building a new compressor station at Hedley; and
- modifying the Oliver Y control station and the Kingsvale compressor station.

The Southern Crossing pipeline will be constructed primarily within, or adjacent to, the rights-of-way of existing transmission pipelines except for 57 kilometres, where divergences will be made to avoid impacts. The entire pipeline route is located in the Columbia River watershed and will require 137 watercourse crossings. The proposed pipeline will cross a variety of terrain and ecosystems containing sensitive habitats and species.

A comprehensive review of the proposal addressed issues along the entire length of the pipeline and at the compressor sites. The proponent conducted public open houses, issued notices, studied available reports, met with stakeholders, and responded to letters and telephone calls to identify all concerns and issues relating to the project. The key issue was the impact on fish habitat at the water crossings. Other environmental issues included access roads, land-clearing and trenching, soils, hydrology, water quality, vegetation, and wildlife.

The Department of Fisheries and Oceans required that all crossings have a contingency plan and a plan for habitat compensation where adverse impacts cannot be mitigated. All instream construction will occur during periods of low flow, using a technique appropriate for each location.

BC Gas developed an environmental protection plan containing guidelines and protection measures to minimize impacts on environmental and related aboriginal interests. In addition, BC Gas will address: access management, restoration and monitoring of fish habitat, weed control, terrestrial wildlife habitat mitigation and compensation, water quality monitoring, erosion and sediment control, and forest fire prevention.

Socio-economic and health concerns include the potential impacts on agriculture, trapping, hunting, noise, air quality, waste management, community water supply, recreational trails, residential and hobby farm properties, safety, and tourism.

The schedule of construction takes into account sensitive seasonal activities of wildlife, and seasonal changes in hydrology and human activity. The proponent will keep authorities, landowners, stakeholders and communities informed about the schedule of construction, will have appropriate inspectors and monitors onsite during work, and will discuss and carry out compensation and restoration measures.

The air quality in the vicinity of the compressor stations will meet the strictest air quality objectives. The new compressors will have dry, low-nitrogen-oxides technology to reduce stack emissions. Dry gas seals, low-bleed equipment, and advanced control systems will reduce greenhouse gas emissions. Other mitigation measures will be taken to reduce noise and odour. When the stations are shut down, the sites will be restored for any future land use.

BC Gas has committed to hiring 25 per cent (approximately 220 person-years) of its workforce from the local area. Longer-term economic benefit to the communities and First Nations along the route is expected from annual property taxes.

An archaeological study on 19 new and 39 previously recorded archaeological sites was completed. Further studies will be conducted on some sites, while others will be avoided through a process of archaeological monitoring or fencing, with the assistance of a qualified archaeologist.

The project passes through the traditional lands of the Lower Kootenay Band and the reserve of the Osoyoos Band, as well as the traditional lands of the Lower Similkameen and Upper Similkameen Bands. BC Gas has committed to mitigation and compensation measures for all identified aboriginal interests, including a change of route through the reserve lands. In addition, BC Gas has agreed to hire an employment liaison person to assist First Nations in obtaining employment on the project.

## CERTIFIED PROJECTS - TRANSPORTATION

### Greenville – Kincolith road

**Proponent:** Ministry of Transportation and Highways

**Location:** Greenville to Kincolith

**Date of Application:** January 1996

**Date of Approval:** October 1999

**Value of Investment:** $30 million

**Construction Jobs (person-years):** 150

**Operating Jobs:** 2

The project extends the Nisga'a highway from Greenville to the isolated Nisga'a village of Kincolith. The proposed 24.3-kilometre, two-lane, gravel highway between Greenville and Kincolith will be maintained as a provincial highway and will provide year-round road access to and from Kincolith.

The key issues of this project are the social, health and safety, and economic impacts on the community and the environmental impacts on wildlife and fish.

Kincolith, a community accessible by air and sea, will benefit from all-weather access to medical care and to the high school in New Aiyansh. At present, high school students must go to Prince Rupert and live in group homes.

Economic benefits include easier and cheaper access to consumer goods that would otherwise have to be barged in, and the development of industries, such as logging, tourism and fishing, which will provide jobs in the community.

The proposed highway is located on Nisga'a lands in an area considered to support the greatest diversity of wildlife in B.C. Of the 217 known species, several red- and blue-listed species are found in the proposed right-of-way. Strict environmental protection measures, including a grizzly bear mitigation plan, have been developed to safeguard fish, grizzly bears,

bald eagles, geese and mountain goats during road construction.

Fish habitat types in the project area are dominated by wetlands, riparian areas and intertidal foreshore. Major modification of the foreshore, including infilling of the Nass River Marsh, will impact significant fish habitat. The only way to mitigate these impacts is through compensation. The Ministry of Transportation and Highways has committed to a "no net-loss" foreshore compensation program that will re-create the physical environment of intertidal areas, including constructing new sedge habitat. Other protective measures include a site-specific mitigation plan for the Iknouk River estuary, and a range of mitigation measures to protect riparian habitat, juvenile fish passage at stream crossings, water quality, and a sediment and drainage plan.

The proponent has committed to prepare an environmental action plan to cover all phases of construction. The proponent will also conduct post-monitoring programs to determine the success of the stream and foreshore habitat compensation. If objectives are not being met, additional measures will be implemented.

The proposed highway will pass through land that has traditionally been used by both the Nisga'a and Tsimshian First Nations. The road will pass through four Indian Reserves. The major issues of concern to the Nisga'a Tribal Council included public safety, potential impacts on aquatic and terrestrial wildlife harvesting, and preserving cultural artifacts.

The primary issues of the Tsimshian Tribal Council were the crossing of Red Bluff Indian Reserve and potential impacts on eulachon harvesting around Keazoah Creek and in Fishery Bay. Other issues included the preservation of cultural artifacts and employment opportunities.

First Nations and the proponent have agreed on measures to resolve any impacts of the project on First Nations, including a re-alignment to avoid identified grave sites, traditional fishing camps and culturally modified trees.

## Summary of Projects Certified Between April 1, 1999 and March 31, 2000

| | Location | Investments ($Million) | Jobs | | Date Certified |
|---|---|---|---|---|---|
| | | | Construction (person-years) | Operating (permanent) | |
| **ENERGY** | | | | | |
| **Pingston Creek hydroelectric power plant** Canadian Hydro Developers Inc. | South of Revelstoke | 35.0 | 127 | 1 | May 1999 |
| **Maxhamish pipeline** Paramount Resources Ltd./ Berkley Petroleum Corp | Fort Nelson, northeast of Maxhamish Lake | 40.8 | 33 | 8 | December 1999 |
| **Port Alberni cogeneration** Pan Canadian Petroleum Ltd. and ATCO Power Canada | Port Alberni | 240.0 | 254 | 23 | December 1999 |
| **LNG storage facility** Westcoast Gas Services Inc. | McNab Creek Valley, Howe Sound | 120.0 | 125 | 12 | April 1999 |
| **Southern Crossing pipeline** BC Gas Utility Ltd. | Southern B.C., Yahk to Oliver | 344.6 | 900 | - | May 1999 |
| **Energy Totals** | | 780.4 | 1,439 | 44 | |
| **TRANSPORTATION** | | | | | |
| **Greenville - Kincolith road** Ministry of Transportation and Highways | North of Nass River from Greenville to Kincolith | 30.0 | 150 | 2 | October 1999 |
| **Transportation Totals** | | 30.0 | 150 | 2 | |
| **GRAND TOTAL** | | 810.4 | 1,589 | 46 | |

All numerical data provided by proponents.

## Project Certificate Amendments From April 1, 1999 to March 31, 2000

Four project certificate amendments were issued in 1999-2000, three in the energy sector and one in industrial.

| | Location | Description | Date |
|---|---|---|---|
| **ENERGY** | | | |
| **Keenleyside power plant**<br>Columbia Power Corp | Columbia River at Castlegar | Amendment No. 4: Allows for a minor modification to the location of the transmission line corridor, the use of calcium chloride for dust suppression and minor wording changes to the terms of reference for the Transmission Line Environmental Management Plan | July 1999 |
| **LNG storage facility**<br>Westcoast Gas Services Inc. | Lower Mainland | Amendment No. 1: The proponent must obtain written consent from the Minister prior to disposing of this certificate or any right, title or interest conferred by this certificate or the project | July 1999 |
| **Southern Crossing pipeline**<br>BC Gas Utility Ltd. | Southern B.C. between Yahk and Oliver | Amendment No. 1: Allows for a minor route change and proponent to deal directly with permitting authorities for future minor route adjustments | December 1999 |
| **INDUSTRIAL** | | | |
| **Taiga wood treatment plant**<br>Taiga Forest Products Ltd. | Langley | Change the name of the holder of the certificate from Taiga Forest Products Ltd. to Envirofor Preservers (BC) Ltd. | May 1999 |

## PROJECTS UNDER REVIEW BETWEEN APRIL 1, 1999 AND MARCH 31, 2000

## Summary of Projects under Review as of March 31, 2000

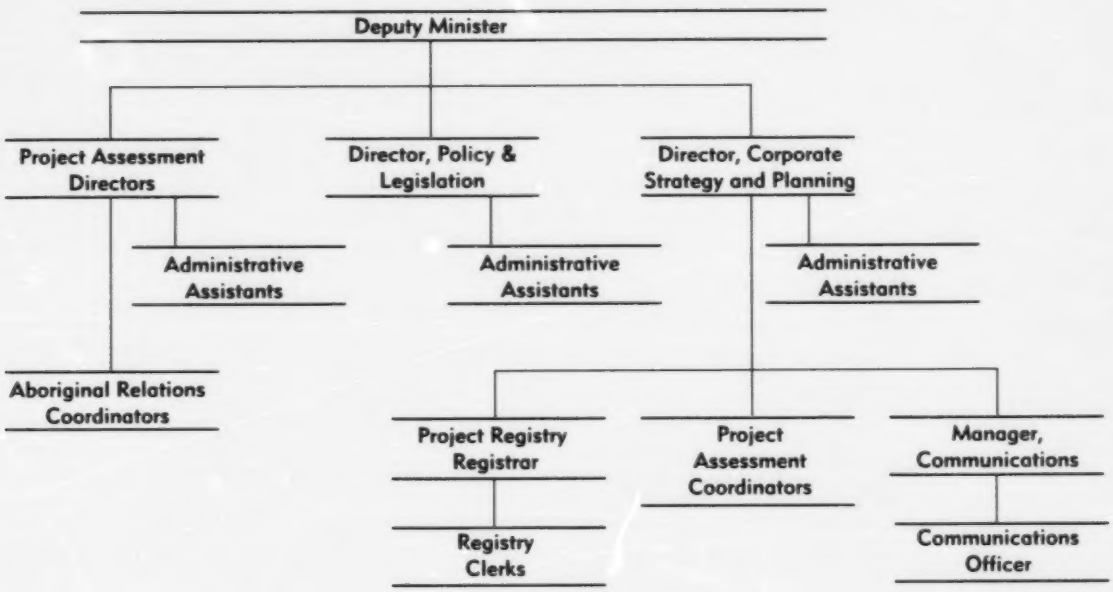
The EAO has nine projects under review as of March 31, 2000 - one energy, five mining, and three tourism and recreation.

| | Location | Investments ($Million) | Construction Jobs (person-years) | Operating Jobs (permanent) | Status of Review |
|---|---|---|---|---|---|
| **ENERGY** | | | | | |
| **Cascade Heritage Power Park**<br>Powerhouse Energy Corp. | Near Christina Lake | 24.0 | 40 | 3 | Specifications finalized. Awaiting project report from proponent |
| **Energy Totals** | | **24.0** | **40** | **3** | |
| **MINING** | | | | | |
| **Tom MacKay Lake waste rock and tailings**<br>Homestake Canada Inc. | 59 km south of Bob Quinn Lake | 4.0 | 3 | - | Application review. Public comment period February 28 to April 28, 2000 |
| **Bronson Slope gold and copper mine**<br>International Skyline Gold | Iskut River region, 110 km northwest of Stewart | 130.0 | 250 | 115 | Awaiting project report from proponent |
| **Prosperity gold and copper mine**<br>Taseko Mines Ltd. | 125 km southwest of Williams Lake | 900.0 | 700 | 650 | Awaiting project report from proponent |
| **Red Chris copper and gold mine**<br>American Bullion Minerals | 20 km southwest of Iskut | 252.0 | 420 | 238 | Awaiting project report from proponent |
| **Silvertip lead, zinc, gold and silver mine**<br>Silvertip Mining Corporation | 85 km southwest of Watson Lake | 40.0 | 150 | 140 | Awaiting project report from proponent |
| **Mining Totals** | | **1,326.0** | **1,523** | **1,1,43** | |
| **TOURISM & RECREATION** | | | | | |
| **Garibaldi at Squamish ski resort**<br>Garibaldi Alpine Resorts (1996) Ltd. | 13 km north of Squamish | 237.8 | 3,048 | 6,501 | Awaiting project report from proponent |
| **Jumbo Glacier alpine resort**<br>Pheidias Project Management Corp. | Jumbo Valley near Invermere | 552.0 | 670 | 1,000 | Awaiting project report from proponent |
| **Melvin Creek/ Cayoosh mountain resort**<br>NGR Resort Consultants Inc. | Between Pemberton and Lillooet | 530.0 | 4,600 | 3,630 | Project report in review |
| **Tourism & Recreation Totals** | | **1,319.8** | **8,318** | **11,131** | |
| **GRAND TOTAL** | | **2,669.8** | **9,881** | **12,274** | |

All numerical data provided by proponents.

Reviews under the Environmental Assessment Act must address fish and wildlife concerns.

## Organizational Chart



## EXPENDITURES 1999/2000

| | 1999-2000 |
|---|---|
| **Salaries and Benefits** | |
| Base salaries | 2,199,973 |
| Supplementary salary costs | 11,064 |
| Employee benefits | 487,636 |
| **Total salaries and benefits** | **$2,698,673** |
| **Operating Costs** | |
| Public servant travel | 159,893 |
| Professional services | 586,326 |
| Information systems - operating | 115,950 |
| Office and business expenses | 162,009 |
| Informational advertising and publications | 85,241 |
| Statutory notices, annual reports | 42,897 |
| Materials, supplies | 4,037 |
| Building occupancy charges | 279,862 |
| **Total operating costs** | **$1,436,215** |
| **Asset Acquisitions** | |
| Information systems | 115,950 |
| Office furniture and equipment | 18,169 |
| **Total asset acquisitions** | **$134,119** |
| **Grants and Contributions** | |
| Contributions - conditional grants | 132,875 |
| **Total grants and contributions** | **$132,875** |
| TOTAL EXPENDITURES | $4,401,882 |

## FOR MORE INFORMATION

The Project Registry, located in Victoria at the Environmental Assessment Office has documents and records for each review application. The registry includes an index of records available for each project and key project review documentation.

Online access to the registry for a list of key documents is available via the Internet at the Environmental Assessment Office's
**Website: www.eao.gov.bc.ca**

The **Guide to the B.C. Environmental Assessment Process** provides a comprehensive summary of the environmental assessment process. It is available online at the Environmental Assessment Office Website, or it can be purchased from:
Crown Publications,
521 Fort Street, Victoria,
B.C. V8W 1E7
Phone: (250) 386-4636
Website: www.crownpub.bc.ca

Further enquiries can be addressed to the Environmental Assessment Office, located at:
1st Floor, 836 Yates St.
Victoria, B.C. V8V 1X4
Phone: (250) 356-7441 (Victoria)
(604) 660-2421 (Lower Mainland)
1-800-663-7867 (Enquiry BC toll-free line for rest of province)
Fax: (250) 356-7440
Email: eaoinfo@gems5.gov.bc.ca
Website: www.eao.gov.bc.ca

Mailing Address:
PO Box 9426 Stn Prov Gov
Victoria, B.C. V8W 9V1

BRITISH COLUMBIA

Prepared by: Alan Dolan & Associates

Project management, writing: Alan Dolan

Illustration and design: Dennis & Struthers Visual Communications Inc.